



# Ground Antenna Systems

## • Overall Objective

- Increase the performance - to - cost ratio of DSN antennas and associated strategic subsystems through technology development and demonstrations

## – Goals and Products

- Develop and demonstrate strategic front-end technologies: RF optics, cryogenic Low Noise Amplifiers, High Efficiency Transmitters and state-of-the-art electronics, instrument controls, and measurement and calibration techniques
- Develop low cost Dichroic Plates for multiple frequency use.
- Enable Ka-band on 70 m antennas by compensating for efficiency roll-off due to gravity induced deformation utilizing an array feed and a deformable mirror technologies operating jointly
- Develop advanced concepts and technologies to support large apertures, either through a single large aperture or an array of many small antennas



70 meter antenna

34 meter

